

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-27. (cancelled)

Sub 28. (currently amended) Apparatus for cold forging of metal workpieces of varying diameter, said apparatus comprising:

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- (i) two opposed dies;
 - (ii) each said die ~~having~~ having a first die part and a second die part;
 - (iii) said second die part being enlarged relative to the first die part, whereby to form stress alleviating means for alleviating stress to the workpiece during cold forging;
 - (iv) the second die part being adapted to allow part of the workpiece to project therefrom, whereby said projecting part of the workpiece is upset and enlarged during cold forging;
 - (v) adjusting means for adjusting the distance of said projecting part of the workpiece beyond said second die part; [[and]]
 - (vi) means for providing for a uniform forging pressure, ~~for any diameter~~ varying diameters of workpiece during forging[[.]]; and
 - (vii) control means for automatic control of said pressure, said control means including a sensor acting to ensure that there is no need to adjust the pressure applied whatever the diameter of the workpiece.
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29. (currently amended) Apparatus as defined in Claim 28, wherein said ~~means for providing for a uniform working pressure includes a sensor~~ is adjacent a face of the dies from

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which the workpiece projects.

30. (currently amended) Apparatus as defined in Claim 29, wherein said opposed dies define a face and wherein said ~~means for providing for a uniform working pressure~~ sensor is adjacent said face.

31. (currently amended) Apparatus as defined in Claim 29, further comprising pressing means for pressing the die ~~[[pates]]~~ parts together in a pressing direction, and pressure applying means ~~for applying~~ pressure in a direction substantially at 90° to said ~~[[press]]~~ pressing direction.

32. (previously presented) Apparatus as defined in Claim 31, wherein the pressing means comprise an hydraulic press acting substantially vertically.

33. (previously presented) Apparatus as defined in Claim 31, wherein the pressure applying means comprise an hydraulic press acting substantially horizontally.

34. (previously presented) Apparatus as defined in Claim 33, wherein at least the distance between the dies and the substantially horizontally acting hydraulic press is directly adjustable.

35. (previously presented) Apparatus as defined in Claim 33, wherein at least the distance (v) between the dies and the substantially-horizontally acting hydraulic press is indirectly adjustable.

36. (previously presented) Apparatus as defined in Claim 33, wherein the distance (v) between the dies and the substantially-horizontally acting hydraulic press is adjustable by adjusting

a forging piston for effecting forging.

37. (previously presented) Apparatus as defined in Claim ⁶~~33~~, wherein the distance between the dies and the substantially-horizontally acting hydraulic press is adjustable by adjustment of a forging pad on which a forging piston can act.

38. (previously presented) Apparatus as defined in Claims ⁵~~32~~, wherein the pressure of the substantially vertically acting hydraulic press is adjustable.

39. (previously presented) Apparatus as defined in Claim ¹~~28~~, wherein the enlarged die part comprises a substantially U-shaped groove therein.

40. (previously presented) Apparatus as defined in Claim ¹~~28~~, wherein the first die part has an internal die configuration substantially complementary to the external configuration of a major part of a workpiece which is to be forged.

41. (**currently amended**) A method of cold forging elongate metal workpieces of varying diameter, the method comprising the steps of:

- (i) providing two opposed dies;
- (ii) providing each die with a first die part and with a second die part which is enlarged with respect to the first die part to form stress alleviating means for alleviating stress to the workpiece during cold forging[.];
- (iii) inserting an elongate workpiece between the dies so that the first die part receives a main part of the workpiece and part of the workpiece projects through and beyond the second die part;
- (iv) upsetting the projecting part, with a uniform forging pressure regardless of the diameter of the workpiece, so that the projecting part flows into the enlarged second die part[.];

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(v) providing that the distance of the projecting part of the workpiece beyond the second die part is adjustable; and

(vi) providing control means for automatic control of said pressure whereby there is no need to adjust the pressure applied whatever the diameter of the workpiece.

42. (previously presented) A method as defined in Claim 41, further comprising the step of providing in each die a relief channel for receiving a rib of the workpiece.

43. (previously presented) A method as defined in Claim 41, further comprising the step of forming a thread on the enlarged part of the workpiece.

44. (previously presented) A method as defined in Claim 41, further comprising the step of adjusting the distance of the projecting part of the workpiece beyond the second die part.

45. (new) A method of cold forging elongate metal workpieces of varying diameter, the method comprising the steps of:

(i) providing two opposed dies;

(ii) providing each die with a first die part and with a second die part which is enlarged with respect to the first die part to form stress alleviating means for alleviating stress to the workpiece during cold forging;

(iii) inserting an elongate workpiece between the dies so that the first die part receives a main part of the workpiece and part of the workpiece projects through and beyond the second die part;

(iv) providing a pressing piston facing a face of the opposed dies from which face the workpiece projects;

(v) upsetting the projecting part, with a forging pressure applied from said press to said projecting part ^{by the pressing piston} so that the projecting part flows into the enlarged second die part; and

(vi) ceasing application of the forging pressure when a spacing between the press and said face reaches a predetermined distance.

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46. (new) The method of claim 45, wherein step (vi) is performed without allowing the press and said face to physically contact, while allowing upsetting of the projecting part to continue.

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47. (new) The method of claim 45, further comprising the steps of providing a sensor between said face and said press, said sensor being adjacent to said face and defining said predetermined distance; and

actuating said ceasing by said sensor when the spacing between the press and said face has reached said predetermined distance.

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